Table 1 - Metal Loads from Selected Adits in the Upper Animas Basin High Flow (Pounds per day) Low Flow

| | | Hi | gh Flo | low (Pounds per day) | | | ay) | Low | Flow | | | | | |
|---------------------------------|----------|-----------|-------------|----------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|---------------|
| Mine | %Removal | \$ 1000's | Al | Cd | Cu | Fe | Mn | Zn | Al | Cd | Cu | Fe | Mn | Zn |
| Cement Creek | | | | | | | | | | | | | | |
| Gold King 7 level | | | <u>98.7</u> | <u>.186</u> | <u>17.6</u> | <u> 360</u> | <u>73.9</u> | <u>71.3</u> | <u>60.1</u> | <u>.162</u> | <u>15.4</u> | <u>224</u> | <u>86.1</u> | <u>60.3</u> |
| <u>Red & Bonita</u> | | | <u>13.3</u> | <u>.13</u> | <u>.081</u> | <u>318</u> | <u>118</u> | <u>56.6</u> | <u>13.5</u> | <u>.136</u> | <u>.021</u> | <u>356</u> | <u>129</u> | <u>61.9</u> |
| <u>American Tunnel</u> | | | <u>8.6</u> | <u>.004</u> | <u>.011</u> | <u>215</u> | <u>74.8</u> | <u>29.2</u> | <u>7.0</u> | <u>.003</u> | <u>.008</u> | <u> 192</u> | <u>66.0</u> | <u> 26.3</u> |
| <u>Mogul (2009)</u> | | | <u>3.1</u> | <u>.05</u> | <u>.04</u> | <u>32.0</u> | <u>27.2</u> | <u>29.1</u> | <u>2.0</u> | <u>.034</u> | <u>.017</u> | <u>21.0</u> | <u> 19.1</u> | <u>21.1</u> |
| Mogul | 80% | 1000 | 1 | 0.04 | 1.7 | 14 | 4 | 2 | 1 | 0.02 | 0.7 | 5 | 1 | 3 |
| Silver Ledge | 50% | 300 | 25 | 0.09 | 0.6 | 222 | 33 | 15 | 4 | 0.03 | 0.0 | 56 | 11 | 3 |
| Grand Mogul | 0% | 60 | 15 | 0.15 | 5.3 | 33 | 10 | 27 | 1 | 0.01 | 0.2 | 0 | 0 | 1 |
| Mammoth | 30% | 60 | 1 | 0.00 | 0.0 | 14 | 2 | 8 | 1 | 0.00 | 0.0 | 16 | 2 | 0 |
| Anglo-Saxon | 30% | 60 | 0 | 0.00 | 0.0 | 15 | 10 | 2 | 0 | 0.01 | 0.0 | 15 | 5 | 1 |
| Joe & Johns | 30% | 300 | 0 | 0.00 | 0.2 | 1 | 1 | 1 | 0 | 0.00 | 0.0 | 1 | 0 | 0 |
| Big Colorado | 50% | 300 | 1 | 0.00 | 0.0 | 3 | 3 | 0 | 1 | 0.00 | 0.0 | 6 | 0 | 0 |
| Porcupine | 30% | 60 | 0 | 0.00 | 0.0 | 14 | 5 | 1 | 0 | 0.00 | 0.0 | 10 | 5 | 1 |
| Evelyn | 50% | 1000 | 1 | 0.00 | 0.0 | 2 | 0 | 0 | 2 | 0.00 | 0.0 | 3 | O | 0 |
| Lewis property | 50% | 60 | 0 | 0.01 | 0.4 | 2 | 0 | 1 | 0 | 0.01 | 0.4 | 2 | 0 | 1 |
| Total Cement Creek | | | 44 | 0.29 | 8.3 | 320 | 68 | 57 | 10 | 0.07 | 1.3 | 113 | 25 | 12 |
| Mineral Creek | | | | | | | | | | | | | | |
| Koehler (2005) | | | 13.4 | .1 | 5.8 | 63 | 14.6 | 37.9 | 7.1 | .1 | 2.5 | 51 | 4.2 | 15.4 |
| Koehler | 50% | 60 | 33 | 0.36 | 30.7 | 321 | 10 | 91 | 28 | 0.25 | 28.3 | 264 | 8 | 78 |
| North Star | 50% | 300 | 0 | 0.02 | 0.1 | 6 | 16 | 4 | 1 | 0.02 | 0.2 | 6 | 11 | 3 |
| Junction Mine | 50% | 300 | 13 | 0.07 | 2.2 | 126 | 3 | 14 | 0 | 0.00 | 0.1 | 3 | 0 | 0 |
| Bandora Mine | 30% | 60 | 0 | 0.04 | 0.1 | 5 | 4 | 10 | 0 | 0.02 | 0.0 | 2 | 2 | 4 |
| Upper Bonner | 50% | 300 | 1 | 0.00 | 0.0 | 1 | 1 | 1 | 2 | 0.01 | 0.0 | 2 | 1 | 1 |
| Ferrocrete Mine | 50% | 300 | 2 | 0.00 | 0.0 | 31 | 5 | 1 | 3 | 0.01 | 0.0 | 32 | 7 | 1 |
| Paradise | 0% | 60 | 28 | 0.00 | 0.1 | 246 | 20 | 2 | 28 | 0.00 | 0.1 | 246 | 20 | 2 |
| Brooklyn Mine | 30% | 300 | 1 | 0.01 | 0.2 | 8 | 2 | 2 | 1 | 0.01 | 0.2 | 8 | 2 | 2 |
| Bonner Mine | 50% | 300 | 1 | 0.01 | 0.0 | 1 | 1 | 1 | 2 | 0.00 | 0.0 | 2 | 1 | 0 |
| Lower Bonner | 30% | 300 | 1 | 0.00 | 0.0 | 1 | 0 | 0 | 2 | 0.00 | 0.0 | 2 | 1 | 1 |
| Little Dora | 50% | 300 | 1 | 0.33 | 0.9 | 5 | 653 | 48 | 0 | 0.00 | 0.0 | 0 | 2 | 0 |
| Total Mineral Creek | | | 81 | 0.85 | 34.3 | 751 | 715 | 175 | 65 | 0.31 | 28.9 | 566 | 54 | 93 |
| Animas above Eureka | | | | | | | | | | | | | | |
| Vermillion Mine | 50% | 300 | 0 | 0.04 | 0.2 | 2 | 1 | 9 | 0 | 0.01 | 0.1 | 1 | 0 | 3 |
| Columbus | 50% | 300 | 1 | 0.01 | 0.3 | 3 | 0 | 9 | 0 | 0.02 | 0.1 | 1 | 0 | 4 |
| Lower Comet | 0% | 10 | 2 | 0.00 | 0.1 | 2 | 2 | 1 | 2 | 0.00 | 0.0 | 1 | 1 | 1 |
| N side of Calif. Mtn. | 30% | 60 | 4 | 0.01 | 0.0 | 1 | 5 | 2 | 4 | 0.01 | 0.0 | 1 | 5 | 2 |
| Sound Democrate | 50% | 60 | 0 | 0.00 | 0.1 | 0 | 4 | 1 | 0 | 0.00 | 0.0 | 0 | 2 | 0 |
| Mountain Queen | 50% | 300 | 0 | 0.00 | 0.2 | 1 | 0 | 1 | 0 | 0.00 | 0.1 | 0 | 0 | 0 |
| Silver Wing | 30% | 0 | 0 | 0.00 | 0.1 | 0 | 0 | 0 | 0 | 0.00 | 0.3 | 1 | 1 | 1 |
| Bagley | 30% | 300 | 0 | 0.01 | 0.0 | 0 | 13 | 7 | 0 | 0.01 | 0.0 | 0 | 6 | 3 |
| Senator | 30% | 300 | 0 | 0.00 | 0.0 | 21 | 7 | 0 | 1 | 0.00 | 0.0 | 23 | 14 | 2 |
| Total Animas above Eurek | (a | | 8 | 0.08 | 1.0 | 30 | 33 | 29 | 8 | 0.06 | 0.7 | 29 | 29 | 15 |
| Animas below Eureka | | | | | | | | | | | | | | |
| Royal Tiger | 50% | 300 | 5 | 0.04 | 0.8 | 0 | 3 | 7 | 0 | 0.00 | 0.1 | 0 | 0 | 0 |
| Pride of the West | 30% | 60 | 0 | 0.01 | 0.0 | 0 | 0 | 3 | 0 | 0.01 | 0.0 | 0 | 0 | 2 |
| Little Nation | 30% | 300 | 0 | 0.00 | 0.0 | 9 | 2 | 1 | 0 | 0.00 | 0.0 | 4 | 1 | 0 |
| Grand Total Pre-2001 | | | 138 | 1.29 | 44.5 | 1110 | 822 | 271 | 83 | 0.45 | 31.0 | 712 | 109 | 124 |
| | | | | | | | | | | | | | | $\overline{}$ |

| Total CC Increase (2009) | 123 | .33 | 16.0 | 911 | 290 | 184 | 81.6 | .315 | 14.8 | 788 | 299 | 167 |
|--------------------------|-----|------|------|------|------|-----|------|------|------|------|-----|-----|
| Sum of Two Lines Above | 261 | 1.62 | 60.5 | 2021 | 1112 | 455 | 165 | .765 | 45.8 | 1500 | 408 | 391 |

Table 2 - Metal loads from Selected Mine Waste Sites in the Upper Animas Basin

| | | | | Load in pounds per year | | | | | | | |
|---------------------------|-------|-------------|----------------|-------------------------|------|-------|--------|-------|--------|--|--|
| Site Name | Acres | % Reduction | Cost \$1000 | Al | Cd | Cu | Fe | Mn | Zn | | |
| Cement Creek | | | | | | | | | | | |
| Galena Queen | 1.09 | 90 | 300 | 154 | 36.8 | 832 | 6,895 | 0.0 | 6137 | | |
| Kansas City #2 | 0.46 | 40 | 60 | 159 | 7.1 | 39 | 3,979 | 0.0 | 1172 | | |
| Hercules | 1.26 | 90 | 300 | 163 | 30.6 | 168 | 6,712 | 0.0 | 4711 | | |
| Upper Joe & Johns | 0.02 | 40 | 300 | 2 | 0.1 | 2 | 19 | 0.0 | 23 | | |
| Grand Mogul - East | 0.53 | 35 | 300 | 47 | 2.0 | 29 | 745 | 0.0 | 385 | | |
| Kansas City #1 | 0.48 | 40 | 60 | 82 | 1.2 | 19 | 1,618 | 0.2 | 282 | | |
| Black Hawk | 0.20 | 50 | 60 | 82 | 0.5 | 6 | 124 | 0.1 | 108 | | |
| Lead Carbonate | 0.62 | 55 | 300 | 120 | 0.8 | 27 | 1,228 | 0.0 | 179 | | |
| Henrietta 3 | 0.86 | 20 | 60 | 217 | 0.7 | 107 | 4,972 | 0.0 | 113 | | |
| Ross Basin | 0.15 | 10 | 60 | 9 | 0.3 | 18 | 234 | 0.0 | 49 | | |
| Lark | 0.66 | 90 | 60 | 18 | 0.8 | 40 | 886 | 0.0 | 168 | | |
| Pride of the Rockies | 0.05 | 45 | 60 | 7 | 0.1 | 0 | 383 | 0.1 | 7 | | |
| Henrietta # 7 | 1.19 | 40 | 300 | 101 | 0.8 | 25 | 1,685 | 0.0 | 159 | | |
| Mogul | 1.16 | 35 | 300 | 51 | 1.2 | 32 | 942 | 0.0 | 261 | | |
| Cement Creek Total | 8.72 | | | 1,210 | 83.1 | 1,343 | 30,421 | 0.5 | 13,754 | | |
| Mineral Creek | | | | | | -, | , | | | | |
| Brooklyn | 0.25 | 90 | 300 | 58 | 0.8 | 8 | 993 | 117 | 118 | | |
| Bullion King: Lower | 0.86 | 90 | 300 | 641 | 6.0 | 14 | 9,945 | 190 | 629 | | |
| Upper Browns Trench | 0.11 | 40 | 10 | 27 | 0.1 | 8 | 198 | 3 | 9 | | |
| Congress Shaft | 0.35 | 40 | 60 | 11 | 0.2 | 16 | 109 | 11 | 20 | | |
| San Antonio | .33 | 40 | 60 | 211 | 4 | 139 | 3826 | 13 | 532 | | |
| Brooklyn Upper | 2.57 | 20 | | 661 | 3.1 | 38 | 9,909 | 176 | 163 | | |
| Upper Browns | 0.51 | 90 | 60 | 82 | 0.3 | 5 | 1,610 | 6 | 25 | | |
| Little Dora | 1.39 | 30 | 300 | 94 | 0.4 | 43 | 452 | 471 | 66 | | |
| Brooklyn Lower | 0.86 | 20 | 60 | 110 | 0.6 | 9 | 672 | 122 | 105 | | |
| Mineral Creek Total | 7.23 | ****** | | 1,895 | 15.5 | 281 | 27,714 | 1,108 | 1,667 | | |
| Animas above Eureka | | | | | | | | | | | |
| Ben Butler | 0.34 | 40 | 300 | 28 | 0.8 | 8 | 225 | 1 | 165 | | |
| Silver Wing | 1.21 | 50 | 60 | 98 | 1.0 | 123 | 393 | 172 | 131 | | |
| Tom Moore | 0.19 | 90 | 60 | 15 | 0.3 | 1 | 8 | 43 | 73 | | |
| Eagle | 0.07 | 90 | 60 | 1 | 0.1 | 1 | 0 | 7 | 18 | | |
| Lucky Jack | 0.70 | 90 | 60 | 16 | 0.6 | 3 | 14 | 32 | 95 | | |
| Animas above Eureka Total | 3 | 10000000000 | | 157 | 2.8 | 136 | 639 | 256 | 482 | | |
| Animas below Eureka | | | | | | | | | | | |
| Clipper | 0.09 | 90 | 60 | 6 | 0.2 | 7 | 80 | 57 | 70 | | |
| Buffalo Boy | 0.38 | 90 | 60 | 17 | 0.8 | 24 | 13 | 73 | 141 | | |
| Ben Franklin | 0.37 | 90 | 60 | 81 | 0.4 | 13 | 612 | 99 | 95 | | |
| Caledonia | 0.57 | 30 | 60 | 23 | 1.0 | 15 | 1 | 50 | 255 | | |
| Sunnyside | 2.50 | 90 | 1,000 | 40 | 2.3 | 10 | 0 | 536 | 664 | | |
| Animas below Eureka Total | 4 | | | 168 | 4.6 | 69 | 706 | 815 | 1,224 | | |
| GRAND TOTAL | 22 | | | 3,219 | 102 | 1,691 | 55,655 | 2,167 | 16,595 | | |